HW:

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3 Rules of Data Analysis:

1. Make a picture.

2. Make a picture.

3. Make a picture.

Categorical Variables:

- Frequency tables give how many times each category occurs.

- Relative frequency table:

  Create percentages of each category from frequency table

Tables are good, but pictures are better.

- Bar graph
- Pie chart (Circle graph)
- Area Principle:

  Area occupied by part of graph should correspond to data

* This is one way to "manage" the way data is perceived.

Bar Charts:

- Can be either vertical or horizontal
- The distrobutions should NOT touch.
- Either be frequency or relative frequency

- Frequency → use raw numbers
- Relative frequency → $\frac{\text{category amount}}{\text{total amount}}$

Class Gender Bar Chart:

- Vertical, frequency

Good practices:

1. On vertical axis, need enough info, but not too much.

2. MUST have all categories represented on horizontal axis.

$B(\%) = \left(\frac{13}{30}\right)(100\%)$

$= 43\%$

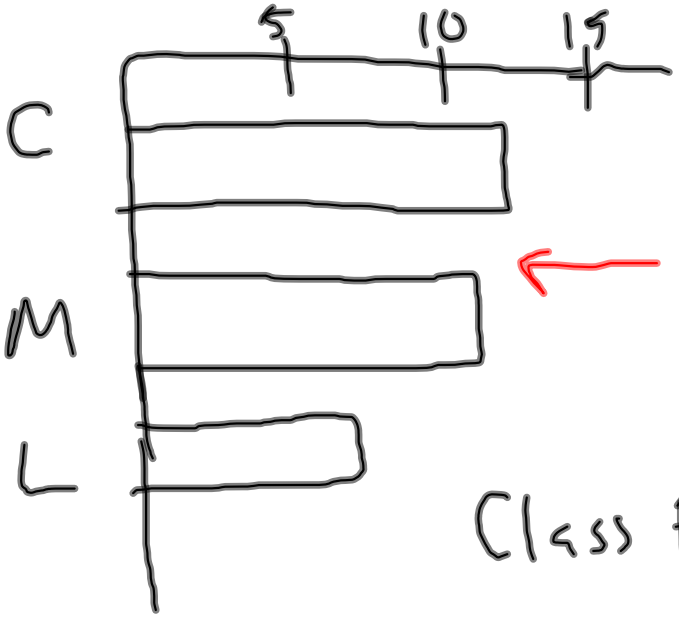
$G(\%) = \left(\frac{17}{30}\right)(100\%)$

$= 57\%$

% MUST ADD TO 100%!

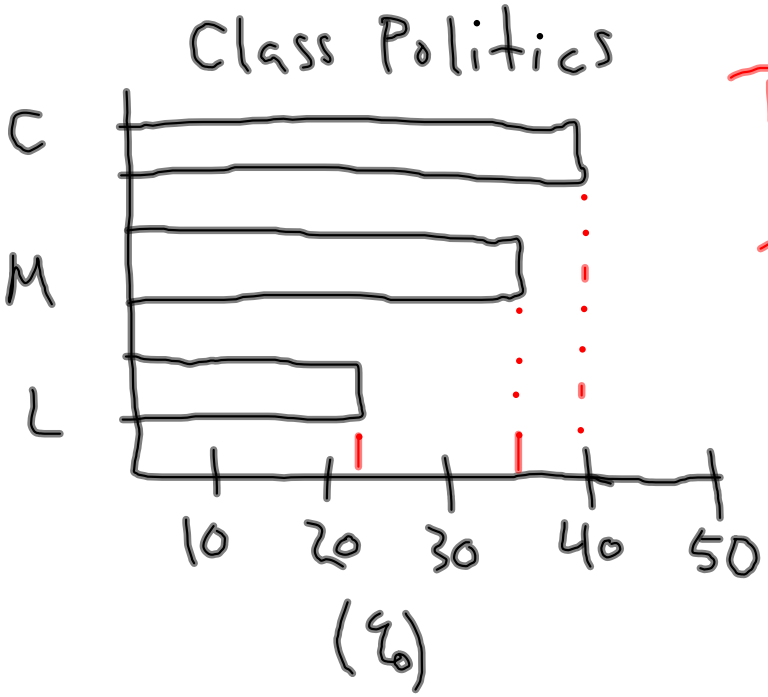
Politics Bar Graph:

- Horizontal, frequency, relative frequency



← Space between bars

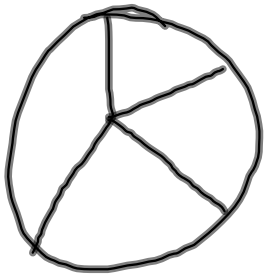
- Relative Frequency



The precision of the increments of the axis determines the precision of reading the value.

Pie Charts:

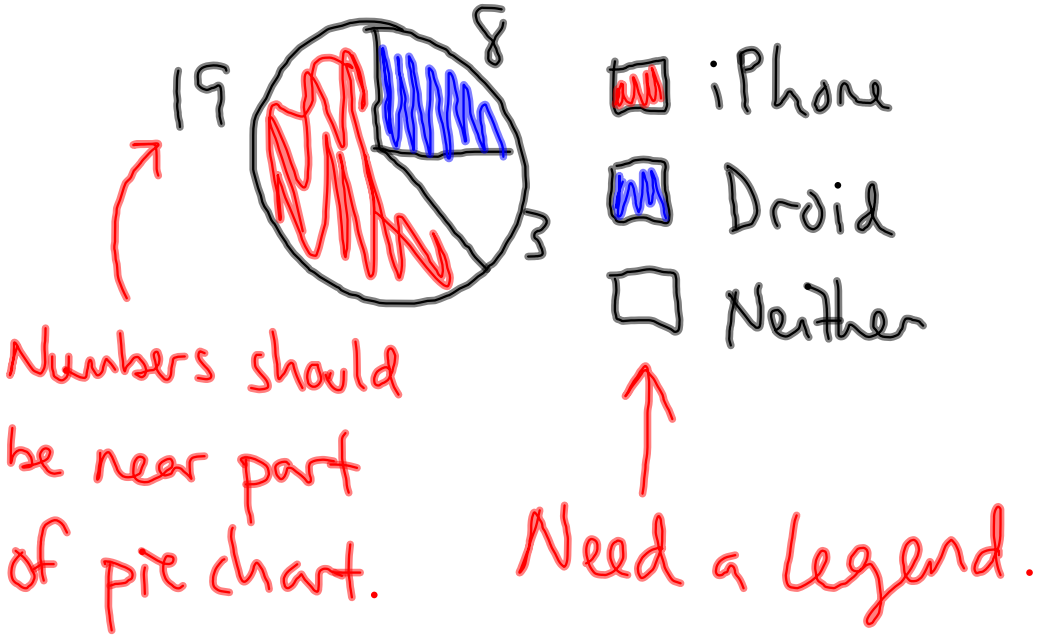
- Either be frequency or relative frequency.



Use percentages to figure out the area of each category.

Phone Comparison:

Class Phones



Class Phones